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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,342	10/01/2003	Stefan Hakansson	P10993-US3	7137
27045	7590	10/09/2007	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			CHANG, JUNGWON	
			ART UNIT	PAPER NUMBER
			2154	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/676,342	Applicant(s) HAKANSSON ET AL.	
	Examiner Jungwon Chang	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/1/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to preliminary amendment filed on 10/1/2003. Claims 1-28 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-13 and 25-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim limitation "SID frames prior to transmission are interleaved using a different interleaving algorithm as compared to that used for the channel encoded source data."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being anticipated by Hamalainen et al. (US 6,477,176 B1), hereinafter Hamalainen, in view of Bruhn (US 6,347,081 B1).

6. As to claim 1, Hamalainen discloses the invention substantially as claimed, including a method for performing discontinuous transmission (DTX) in a communications system (col. 2, lines 12-26; col. 3, lines 15-26) in which source data in a step is interleaved for transmission from a first component in the system to a second component in the system (col. 3, lines 49-67), the method comprising the steps of:

detecting periods of source data inactivity (col. 3, lines 46-49; col. 4, lines 62-65);

and

transmitting silence descriptor (SID) frames from the first to second component during the periods of source data inactivity (4, fig. 1; col. 3, lines 41-56), wherein the SID frames prior to transmission are interleaved (col. 8, lines 27-28; col. 7, lines 30-33) using a different interleaving algorithm as compared to that used for the channel source data (using the two different algorithms are design choice of the software programmer; col. 3, lines 46-56; col. 4, lines 55-65).

7. Hamalainen does not specifically disclose channel encoding. However, Bruhn discloses channel encoding (col. 3, line 66 – col. 4, line 21, “channel coding”; col. 4,

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lines 28-50, "channel decoder"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamalainen and Bruhn because Bruhn's channel encoding would improve the reliability of Hamalainen's system by allowing the channel encoder to identify the characteristics of the received frame, thereby error can be corrected when needed (Bruhn, col. 4, lines 10-27).

8. As to claims 2, 9 and 10, Hamalainen discloses source data is block interleaved, and certain of the SID frames are block interleaved (col. 4, lines 59-67 – col. 5, lines 1-9).

9. As to claim 3, Hamalainen discloses the SID frames include comfort noise (CN) parameters (col. 3, lines 46-49).

10. As to claim 4, Hamalainen discloses type of SID frame to indicate a transition from source data activity to source data inactivity (col. 4, lines 11-35).

11. As to claims 5, 11 and 12, Hamalainen does not specifically disclose adaptive multi-rate (AMR) system. However, Bruhn discloses adaptive multi-rate (AMR) system (col. 2, lines 2-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamalainen and Bruhn because Bruhn's AMR system would lower the codec rate as the interference increases and thus enabling more error correction to be applied that is well known in the

telecommunication.

12. As to claims 6, 7 and 13, Hamalainen does not specifically disclose each SID frame include a gross bit pattern. However, Bruhn discloses each SID frame include a gross bit pattern (col. 1, lines 51-53; col. 4, lines 17-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamalainen and Bruhn because Bruhn's SID bit pattern would provide the information to identify the frame as a SID frame and to distinguish the SID frame from regular speech frames (Bruhn, col. 1, lines 51-53).

13. As to claim 8, Hamalainen discloses time division multiple access wireless system (col. 6, lines 54-61).

14. As to claims 14, 16 and 27, they are rejected for the same reasons set forth in claim 1 above. In addition, Hamalainen discloses a speech communications system in which speech data is transmitted from a first component to a second component (col. 2, lines 54-56; col. 3, lines 29-34), a method for transmitting protocol messages to the second component (col. 12, lines 11-15), comprising the step of :

transmitting an escape frame in place of a speech data frame (col. 3, lines 46-49).

15. Hamalainen does not specifically disclose each SID frame include a gross bit

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pattern. However, Bruhn discloses each SID frame include a gross bit pattern (col. 1, lines 51-53; col. 4, lines 17-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hamalainen and Bruhn because Bruhn's SID bit pattern would provide the information to identify the incoming frame as a SID frame and to distinguish the SID frame from regular speech frames (Bruhn, col. 1, lines 51-53).

16. As to claim 20, Hamalainen discloses transmitting silence descriptor (SID) frames during the periods of speech inactivity (col. 3, lines 46-49).

17. As to claim 21, Hamalainen discloses the SID frames include comfort noise (CN) parameters (col. 3, lines 46-49).

18. As to claim 22, Hamalainen discloses source data is block interleaved, and certain of the SID frames are block interleaved (col. 4, lines 59-67 – col. 5, lines 1-9).

19. As to claim 23, Hamalainen discloses type of SID frame to indicate a transition from source data activity to source data inactivity (col. 4, lines 11-35).

20. As to claim 25, it is rejected for the same reasons set forth in claim 1 above. In addition, Hamalainen discloses a first component transmitting interleaved speech data frames (col. 2, lines 54-56; col. 3, lines 29-34); and

a second component receiving the interleaved speech data frames (col. 2, lines 57-59; col. 4, lines 3-10),

wherein the first component detects periods of speech inactivity (4, fig. 1; col. 3, lines 44-46) and transmits silence descriptor (SID) frames instead of speech data frames during the periods of speech inactivity (col. 3, lines 46-49), and

wherein at least some of the SID frames are interleaved using a different interleaving algorithm as compared to that used for speech frames (col. 4, lines 62-67 – col. 5, lines 1-5).

21. As to claims 15, 17 and 28, they are rejected for the same reasons set forth in claims 14 and 16 above.

22. As to claims 18, 19 and 24, they are rejected for the same reasons set forth in claims 5, 11 and 12 above.

23. As to claim 26, it is rejected for the same reasons set forth in claim 22 above.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Schneider, US 6,570,871, Alanara, US 6,269,331 disclose a method and system for speech communication to discontinuous transmission (DTX) and improving the quality


of comfort noise (CN) during discontinuous transmission.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jungwon Chang whose telephone number is 571-272-3960. The examiner can normally be reached on 6:30-2:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 30, 2007


JUNGWON CHANG
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